



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

**Royal Sluis, B.V.**

Whereas, THERE HAS BEEN PRESENTED TO THE  
**Secretary of Agriculture**

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (P.L. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

CAULIFLOWER

'Vernon'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C.  
this 17th day of June in  
the year of our Lord one thousand nine hundred and eighty-two

*John R. Block*

Secretary of Agriculture

Attest:

*Kenneth B. Edwards*  
Acting  
Commissioner  
Plant Variety Protection  
Grain Division  
Agricultural Marketing Service







Cauliflower Twist13.A Exhibit A: Origin and Breeding History.

Vernon 847 820929  
~~Madon~~ 847 820502

~~Twist~~ has been selected from a cross between Dok Elgon and a Flora-blanca type.

Through family selection, and line selection in a later stage, the current type has been achieved. ~~Twist~~ <sup>is</sup> ~~appears to be~~ stable and uniform through multiplication.

No Variants. 847 820521

13.B Exhibit B: Novelty Statement.

Vernon  
~~Madon~~

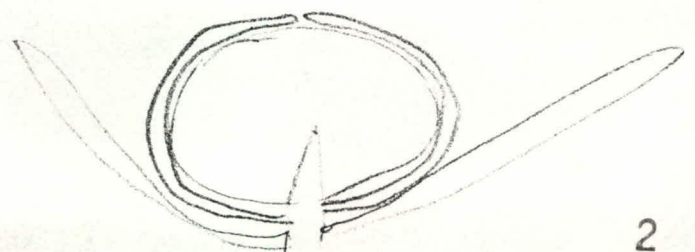
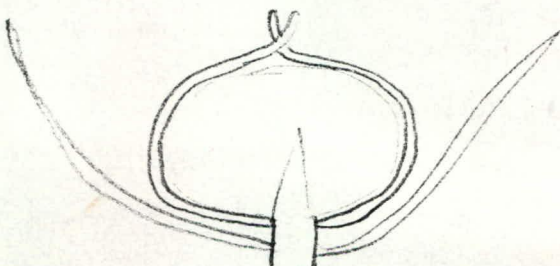
~~Twist~~ mostly resembles Dok Elgon. It differs from Dok Elgon in a better curd protection. Besides that: - Its margins are wavy, while Dok Elgon's are straight; - Its leaves are also more petiolate, and larger than those of Dok Elgon. We measured the largest leaf per plant of 25 plants of each variety.

	length of leaves	width of leaves
<del>Twist</del> <sup>Vernon</sup> <del>Madon</del>	70 cm (S = 5)	33 cm (S = 2)
Dok Elgon	61 cm (S = 4,5)	30 cm (S = 1,7)

Curd diameter is 4 cm wider than Dok Elgon. We measured 25 curds with the following result:

	curd diameter
<del>Twist</del> <sup>Vernon</sup> <del>Madon</del>	22,3 cm, S = 1,8
Dok Elgon	17,9 cm, S = 1,7

~~Twist~~ <sup>Vernon</sup> ~~Madon~~ differs from any other variety in its curd protection. Its wrapper leaves are twisted together over the curd, protecting it very well until maturity. Its nature is best described in a drawing:



U. S. DEPARTMENT  
OF AGRICULTURE  
AMS, LP&S DIV.  
PVPD  
RECEIVED  
MAR 17 1981





# ROYAL SLUIS

KONINKLIJKE ZAAIZAADBEDIJVEN GEBROEDERS SLUIS B.V.

USDA, AMS  
Mr. Thaddeus E. Frey  
Livestock, Poultry, Grain &  
Seed Division  
Nat. Agric. Library Building  
BELTSVILLE, Maryland 20705  
U.S.A.

POSTBOX 22, 1600 AA ENKHUIZEN  
HOLLAND

27th, November 1981.

Subject: cauliflower application No. 8100087,  
Temporary Designation RS 1831

Dear mr. Frey,

In answer to your letter of 10th, November 1981, we can modify our application as follows:

- 1) Exhibit A.  
Please replace the statement 'RS 1831 (<sup>Vernon</sup>~~Twist~~) appears to be stable and uniform through multiplication...' by 'RS 1831 is uniform and stable through multiplication.' *JGT 820302*
- 2) Thank you for your remark on the date of determination. Please change 1970 in 1976, when we started multiplication.
- 3) Please change the statement 'The heart leaves.....is reached' into:  
'The heartleaves of RS 1831 are still twisted in each other when full maturity of the curd is reached. Heartleaves of all other varieties are only twisted in each other till various stages before full maturity.'

We hope this information is sufficient to process the application.

Yours sincerely,

ROYAL SLUIS

J.G. Timmerman  
Marketing dept.

• JGT/CDV

Al onze verkopen worden geacht te hebben plaats gehad op de algemene verkoopsvoorwaarden van onze prijscouranten, indien niet uitdrukkelijk anders is overeengekomen. Onze aanbiedingen zijn vrijblijvend. Overigens gelden de F.I.S.-(RUSPO) condities.

Jeder Verkauf wird anerkannt stattgefunden zu haben zu den allgemeinen Verkaufsbedingungen unserer Kataloge, insofern nicht ausdrücklich anders vereinbart. Unsere Angebote sind unverbindlich. Übrigens gelten die F.I.S.-(RUSPO) Bedingungen.

Toutes nos ventes sont considérées comme ayant eu lieu aux conditions de vente de nos prix-courants à moins que d'autres conditions n'aient été stipulées expressément. Nos offres s'entendent sans engagement. Du reste, les conditions de la F.I.S.-(RUSPO) sont valables.

All our sales are made subject to the terms and conditions as printed in our catalogues, unless otherwise agreed upon. Our offers are without engagement. Further F.I.S.-(RUSPO) conditions. We warrant that the seeds we sell will be, at the time of delivery, as described on the container within recognized tolerances. We give no other or further warranty, express or implied. We limit our liability on the foregoing warranty and its liability by reason of any other cause whatsoever to the amount of the purchase price of such seeds.



## INSTRUCTIONS

**GENERAL:** Send an original copy of the application and exhibits, at least 2,500 viable seeds, and \$500 fee (\$250 filing fee and \$250 examination fee) to U.S. Dept. of Agriculture, Agricultural Marketing Service, Livestock, Poultry, Grain and Seed Division, Plant Variety Protection Office, National Agricultural Library Building, Beltsville, Maryland 20705. (See section 180.175 of the Regulations and Rules of Practice.) Retain one copy for your files. All items on the face of the form are self-explanatory unless noted below.

### ITEM

- 5 Give the date the applicant determined that he had a new variety based on (1) the definition in section 41(a) of the Act and (2) the date a decision was made to increase the seed.
- 13a Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified and (4) evidence of uniformity and stability.
- 13b Give a summary statement of the variety's novelty. Clearly state how this novel variety may be distinguished from all other varieties in the same crop. If the new variety most closely resembles one or a group of related varieties: (1) identify these varieties and state all differences objectively; (2) attach statistical data for characters expressed numerically and demonstrate that these differences are significant; and (3) submit, if helpful, seed and plant specimens or photographs of seed and plant comparisons clearly indicating novelty.
- 13c Fill in the Exhibit C, Objective Description form, for all characteristics for which you have adequate data.
- 13d Describe any additional characteristics that are not described, or whose description cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the description of characteristics that are difficult to describe, such as, plant habit, plant color, disease resistance, etc.
- 14a If "YES" is specified (seed of this variety be sold by variety name only as a class of certified seed) the applicant may NOT reverse his affirmative decision after the variety has either been sold and so labeled, his decision published, or the certificate has been issued. However, if the applicant specified "NO," he may change his choice. (See section 180.16 of the Regulations and Rules of Practice.)
- 15a See section 42 of the Plant Variety Protection Act and section 180.7 of the Regulations and Rules of Practice.



# APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY <b>RS1831</b> <del>Twist</del> <i>JE4 8/10/13</i>		1b. VARIETY NAME <i>Madon</i> <i>Version JE4 8/20/82</i> <i>JE4 8/20/82</i>		<b>FOR OFFICIAL USE ONLY</b>	
2. KIND NAME <b>Cauliflower</b>		3. GENUS AND SPECIES NAME <b>Brassica oleracea</b> <i>JE4 8/10/81</i> <b>var. botrytis</b>		PV NUMBER <b>8100087</b>	FILING DATE <b>4/2/81</b>
4. FAMILY NAME (BOTANICAL) <b>Crucifers</b>		5. DATE OF DETERMINATION <b>1970 1976</b> <i>JE4 8/12/09</i>		FEE RECEIVED \$ <b>500.00</b> \$ <b>250.00</b>	TIME <b>11:00</b> <b>A.M.</b> <b>P.M.</b>
6. NAME OF APPLICANT(S) <b>Royal Sluis</b>		7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) <b>P.O. Box 22, 1600 AA ENKHUIZEN, The Netherlands</b>		8. TELEPHONE AREA CODE AND NUMBER	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.)			10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION		11. DATE OF INCORPORATION

12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS:

**J.G. Timmerman, Royal Sluis, P.O. Box 22, 1600 AA ENKHUIZEN, Holland**

## 13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☒ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☐ YES ☒ NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☒ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☒ YES ☐ NO (If "Yes," give name of countries and dates.)

**The Netherlands 4/4/1979**

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☐ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

**9 March, 1981.**  
(DATE)

*[Signature]*  
(SIGNATURE OF APPLICANT)

(DATE)

(SIGNATURE OF APPLICANT)



## 6. CURD:

<input type="checkbox"/> 1	1 = TIGHT	2 = LOOSE	<input type="checkbox"/> 3	SHAPE:	1 = FLAT	2 = SEMI-DOME
					3 = DOME	
<input type="checkbox"/> 2	1 = SMOOTH	2 = KNOBBY				
<input type="checkbox"/> 1	COLOR:	1 = BRIGHT WHITE	2 = CREAMY, DULL WHITE	<input type="checkbox"/> 1	1 = NO LEAVES IN CURD	2 = LEAVES IN CURD
		3 = PURPLE-GREEN				

## 7. DISEASE RESISTANCE: (0 = Not Tested; 1 = Susceptible, 2 = Resistant. Specify race if known)

<input type="checkbox"/> 0	BLACK SPOT	<input type="checkbox"/> 0	CLUBROOT
<input type="checkbox"/> 0	PHYTOPHTHORA ROOT ROT	<input type="checkbox"/> 1	WHITE BLISTER
<input type="checkbox"/> 0	BLACK ROT	<input type="checkbox"/> 0	BOTTOM ROT
<input type="checkbox"/> 0	CERCOSPORELLA LEAF SPOT	<input type="checkbox"/> 0	DOWNY MILDEW
<input type="checkbox"/> 0	POWDERY MILDEW	<input type="checkbox"/> 0	VERTICILLUM WILT
<input type="checkbox"/> 0	BLACK LEG	<input type="checkbox"/> 0	CAULIFLOWER MOSAIC
<input type="checkbox"/> 0	RING SPOT	<input type="checkbox"/> 0	TURNIP YELLOW MOSAIC
<input type="checkbox"/> 0	YELLOWS	<input type="checkbox"/> 0	WIRE STEM
<input type="checkbox"/> 0	OTHER (Specify) _____		

## 8. OTHER RESISTANCE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

<input type="checkbox"/> 2	"BUTTONING"	<input type="checkbox"/> 0	"BLINDNESS"
<input type="checkbox"/> 2	"RICEYNESS"	<input type="checkbox"/> 0	"WHIPTAIL"
<input type="checkbox"/> 0	INSECT (Specify) _____		

## 9. INDICATE A VARIETY THAT MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	VARIETY	CHARACTER	VARIETY
MATURITY	Dok Elgon	PLANT COLOR	Dok Elgon
ADAPTATION	Dok Elgon	CURD SIZE	Nimba Meda
PLANT HABIT	Dok Elgon	CURD SHAPE	Dok Elgon
PLANT SIZE	Flora Blanca	CURD COLOR	Nimba Meda

## REFERENCE:

Nieuwhof, M. 1969. Cole Crops — World Crop Series, Leonard Hill.

## COMMENTS:



FORM GR-470-30  
(7-1-74)U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
GRAIN DIVISION  
HYATTSVILLE, MARYLAND 20782  
**OBJECTIVE DESCRIPTION OF VARIETY**  
**CAULIFLOWER**  
(*Brassica oleracea* var. *botrytis*)

NAME OF APPLICANT(S)  Royal Sluis	VARIETY NAME OR TEMPORARY DESIGNATION <i>Verdon</i> <i>584 820929</i> <i>Madon</i> <i>584 820302</i>
ADDRESS (Street and No., or F.F.D. No., City, State, and ZIP Code)  P.O. Box 22, 1600 AA ENKHUIZEN, The Netherlands	FOR OFFICIAL USE ONLY PVPO NUMBER 8100087

Place the appropriate number that describes the varietal character of this variety in the boxes below.  
Place a zero in first box (e.g.  or ) when number is either 99 or less or 9 or less.

## 1. REGION OF ADAPTATION: (Where best adapted in the U.S.A.)

<input type="text" value="6"/>	1 = NORTHWEST	2 = NORTHCENTRAL	3 = NORTHEAST	4 = SOUTHEAST	5 = SOUTHWEST
	6 = MOST REGIONS				

## 2. SEASON: (Main crop)

<input type="text" value="4"/>	1 = LATE FALL - EARLY WINTER	2 = LATE WINTER - EARLY SPRING
	3 = LATE SPRING - EARLY SUMMER	4 = LATE SUMMER - EARLY FALL

## 3. MATURITY: (Days to 50% harvest)

<input type="text" value="1"/> <input type="text" value="0"/> <input type="text" value="7"/>	FROM TRANSPLANTS	<input type="text" value="2"/> <input type="text" value="1"/>	NO. DAYS HARVESTING PERIOD
<input type="text" value="0"/> <input type="text" value="9"/> <input type="text" value="7"/>	FROM DIRECT SEEDING		

## 4. PLANT HEIGHT: (At harvest)

<input type="text" value="2"/> <input type="text" value="4"/>	CM. FROM SOIL LINE TO TOP OF CURD		
<input type="text" value="0"/> <input type="text" value="3"/>	CM. TALLER THAN . . . . .	<input type="text" value="3"/>	1 = EARLY ERFURT 2 = SUPER SNOWBALL A
<input type="text" value="0"/> <input type="text" value="4"/>	CM. SHORTER THAN . . . . .	<input type="text" value="4"/>	3 = SNOWBALL Y
			4 = VEITCH AUTUMN GIANT
			5 = OTHER (Specify) _____

## 5. LEAVES:

<input type="text" value="2"/> <input type="text" value="5"/>	TOTAL NUMBER	<input type="text" value="7"/> <input type="text" value="0"/>	CM. AVERAGE LENGTH AT MID-POINT OF PLANT (Including Petiole)
		<input type="text" value="3"/> <input type="text" value="3"/>	CM. AVERAGE WIDTH AT MID-POINT OF PLANT
<input type="text" value="2"/>	1 = STRAIGHT MARGINS 2 = WAVY MARGINS	<input type="text" value="2"/>	1 = THIN VEINS 2 = THICK VEINS
<input type="text" value="3"/>	1 = MOSTLY SESSILE 2 = MOSTLY PETIOLATE 3 = EQUALLY SESSILE AND PETIOLATE		
<input type="text" value="3"/>	COLOR: 1 = LIGHT GREEN 2 = MEDIUM GREEN (Snowball No. 10) 3 = DARK GREEN (Lecerf Group) 4 = BLUSH GREEN (November)	<input type="text" value="3"/>	1 = UPRIGHT, EXPOSE CURD 2 = INCURVED, PARTIALLY COVER CURD 3 = COMPLETELY COVER CURD (Self blanching)

## 6. CURD:

<input type="text" value="2"/> <input type="text" value="2"/>	CM. DIAMETER	<input type="text" value="1"/> <input type="text" value="0"/>	CM. DEPTH
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